

Name: _____ Class: _____ Date: _____

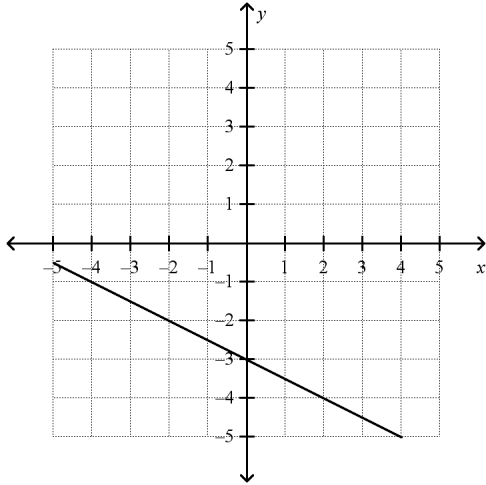
Summer Review for Students entering Algebra 1 2018

Multiple Choice

Identify the choice that best completes the statement or answers the question. *SHOW ALL WORK ON THIS PAPER OR ON ADDITIONAL PAPER.*

Find the slope of the line.

_____ 1.



A. $\frac{1}{2}$

B. $-\frac{1}{2}$

C. -2

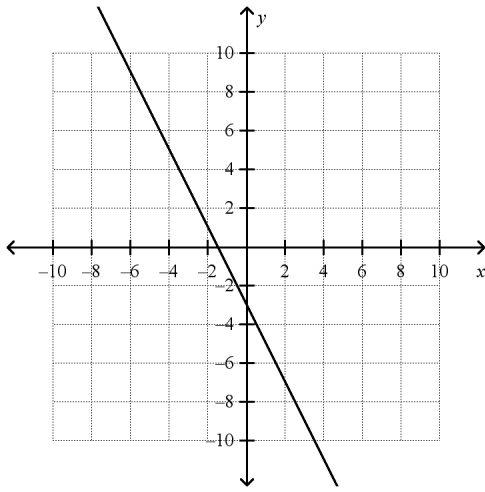
D. 2

Name: _____

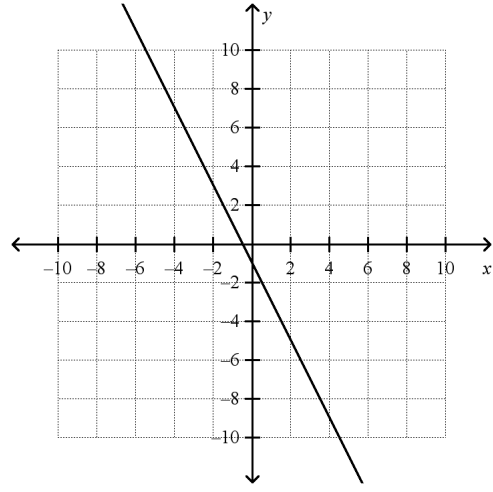
Graph the equation.

_____ 2. $y = -2x - 3$

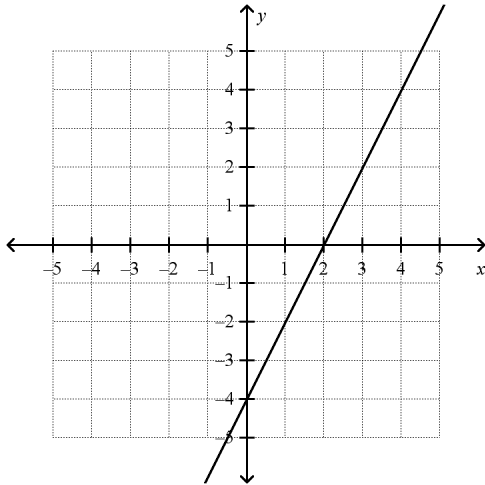
A.



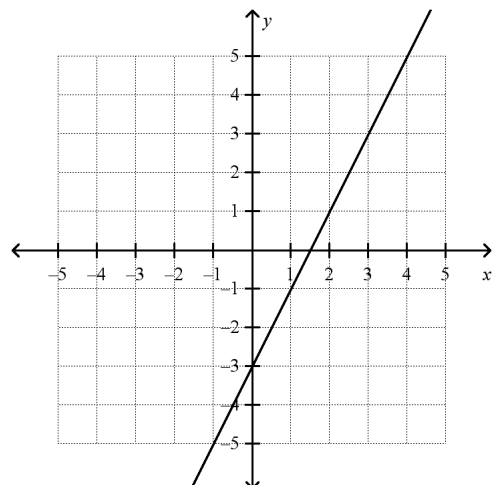
C.



B.



D.



What is the slope of the line that passes through the pair of points?

_____ 3. $(1, 7), (10, 1)$

A. $\frac{3}{2}$

B. $-\frac{2}{3}$

C. $-\frac{3}{2}$

D. $\frac{2}{3}$

Find the value of x that completes the statement.

_____ 4. $\frac{x}{36} = \frac{10}{6}$

A. 10

B. 60

C. $\frac{108}{5}$

D. $\frac{5}{3}$

Name: _____

Add or subtract. Write each answer in simplest form. YOU MAY NOT USE A CALCULATOR.

_____ 5. $\frac{5}{12} - \frac{3}{12}$

A. $\frac{1}{3}$

B. $\frac{1}{6}$

C. $\frac{1}{12}$

D. $\frac{2}{3}$

_____ 6. $\frac{1}{5} + \frac{2}{12}$

A. $\frac{29}{60}$

B. $\frac{1}{20}$

C. $\frac{11}{30}$

D. $\frac{3}{17}$

_____ 7. $\frac{6}{10} + \frac{9}{10}$

A. $2\frac{7}{10}$

B. $5\frac{2}{5}$

C. $\frac{3}{4}$

D. $1\frac{1}{2}$

_____ 8. $\frac{2}{6} - \frac{1}{9}$

A. $\frac{4}{9}$

B. $\frac{1}{18}$

C. $\frac{1}{54}$

D. $\frac{2}{9}$

_____ 9. $6\frac{1}{3} + 5\frac{5}{6}$

A. $11\frac{4}{27}$

B. $12\frac{1}{6}$

C. $11\frac{8}{15}$

D. $12\frac{10}{27}$

What is an algebraic expression for the word phrase?

_____ 10. the difference of r and 3

A. $\frac{r}{3}$

B. $r + 3$

C. $r - 3$

D. $3r$

_____ 11. the quotient of j and 8

A. $\frac{j}{8}$

B. $8j$

C. $j - 8$

D. $j + 8$

What is the simplified form of each expression?

_____ 12. $\frac{1}{3}(21m + 27)$

A. $63m + 9$

B. $7m + 9$

C. $7m + 81$

D. $7m + 27$

_____ 13. $(4 - c)(-1)$

A. $4 - c$

B. $-4 + c$

C. $4 + c$

D. $-4 - c$

Name: _____

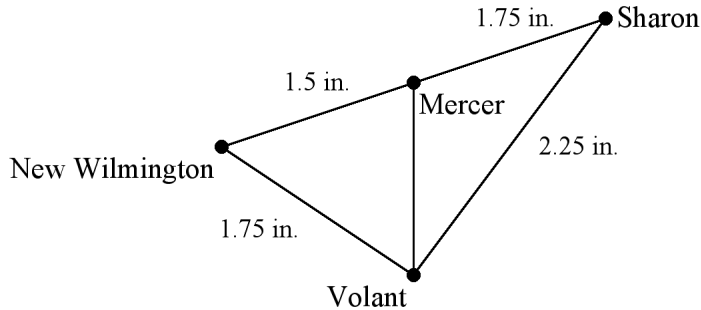
What is the simplified form of each expression?

- _____ 14. $-(8d - 3w)$
A. $8d - 3w$ B. $-8d + 3w$ C. $8d + 3w$ D. $-8d - 3w$

What is the solution of the proportion?

- _____ 15. $\frac{14}{12} = \frac{d}{48}$
A. 56 C. 168
B. 672 D. 576

Use the scale and map measurements to find the actual distance from New Wilmington to Sharon through the specified town.



Scale 1 in. : 12 mi

- _____ 16. What is the actual distance from New Wilmington to Sharon through Volant?
A. 96 mi C. 48 mi
B. 72 mi D. 24 mi
- _____ 17. A map has a scale of 1 cm : 18 km. Two cities are 2.7 cm apart on the map. To the nearest tenth of a kilometer, what is the actual distance corresponding to the map distance?
A. 48.6 km B. 66.6 km C. 138.6 km D. 51.3 km
- _____ 18. Two rectangles are similar. One has a length of 10 cm and a width of 8 cm, and the other has a width of 7 cm. Find the length of the second rectangle. Round to the nearest tenth if necessary.
A. 8.8 cm B. 6.6 cm C. 10.1 cm D. 5.6 cm
- _____ 19. A scale model of a city has scale of 1 cm : 2.5 km. Two buildings in the model are 1.7 cm apart. To the nearest tenth of a kilometer, what is the actual distance between the buildings in the city?
A. 16.8 km B. 6.8 km C. 4.3 km D. 6 km
- _____ 20. Is 112 prime or composite?
A. composite B. prime

Name: _____

Find the greatest common factor of the numbers.

- _____ 21. 14 and 38
A. 5 B. 6 C. 2 D. 4
- _____ 22. 35, 63, and 84
A. 7 B. 14 C. 16 D. 11

Find the least common multiple of the set of numbers.

- _____ 23. 5 and 20
A. 20 B. 100 C. 10 D. 30
- _____ 24. 6, 9, and 12
A. 648 B. 36 C. 18 D. 324
- _____ 25. Identify the fraction that is equivalent to $\frac{5}{7}$.
A. $\frac{25}{28}$ B. $\frac{20}{35}$ C. $\frac{30}{35}$ D. $\frac{25}{35}$

Write the fraction in simplest form.

- _____ 26. $\frac{14}{24}$
A. $\frac{7}{13}$ B. $\frac{2}{3}$ C. $\frac{7}{12}$ D. $\frac{6}{11}$
- _____ 27. $\frac{148}{264}$
A. $\frac{36}{66}$ B. $\frac{37}{64}$ C. $\frac{37}{66}$ D. $\frac{36}{64}$

Write as a decimal.

- _____ 28. $\frac{1}{2}$
A. 0.2 B. 5 C. 2 D. 0.5
- _____ 29. $4\frac{1}{12}$
A. 16 B. $0.\overline{3}$ C. $4.0\overline{83}$ D. $0.0\overline{83}$

Name: _____

Write as a fraction in simplest form.

- _____ 30. 0.32
A. $\frac{32}{99}$ B. $\frac{3}{10}$ C. $\frac{8}{25}$ D. $\frac{99}{32}$

Multiply or divide. Write your answer in simplest form.

- _____ 31. $\frac{3}{6} \times \frac{7}{10}$
A. $\frac{7}{20}$ B. $2\frac{1}{10}$ C. $\frac{5}{7}$ D. $3\frac{1}{2}$

- _____ 32. $\frac{5}{12} \div \frac{2}{8}$
A. $3\frac{1}{3}$ B. $1\frac{2}{3}$ C. 20 D. $\frac{5}{48}$

- _____ 33. $1\frac{1}{3} \times 1\frac{5}{9}$
A. $2\frac{25}{27}$ B. $2\frac{2}{27}$ C. $1\frac{5}{27}$ D. $1\frac{2}{9}$

- _____ 34. $1\frac{1}{3} \div 2\frac{1}{2}$
A. $3\frac{1}{3}$ B. $\frac{1}{3}$ C. $1\frac{7}{8}$ D. $\frac{8}{15}$

Write as a percent.

- _____ 35. 0.63
A. 0.063% B. 6.3% C. 630% D. 63%

- _____ 36. $\frac{1}{5}$
A. 50% B. 5% C. 20% D. 2%

- _____ 37. Write 50% as a decimal.
A. 500 B. 5 C. 0.5 D. 5000

- _____ 38. Write 670% as a fraction or mixed number in simplest form.
A. $\frac{10}{67}$ B. 67 C. $6\frac{7}{10}$ D. $\frac{1}{67}$

- _____ 39. Write $9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9 \cdot 9$ using an exponent.
A. 99^7 B. 7^9 C. 9^7 D. $9 \cdot 7$

Name: _____

- _____ 40. Write 5^2 in standard form.
A. 7 B. 25 C. 10 D. 52

- _____ 41. Write 3954 in expanded form using powers of 10.
A. $(3^3) + (9^2) + (5^1) + (4^0)$
B. $(3 \cdot 10^3) + (9 \cdot 10^9) + (5 \cdot 10^5) + (4 \cdot 10^4)$
C. $(3 \cdot 1000^3) + (9 \cdot 100^2) + (5 \cdot 10^1) + (4 \cdot 1^0)$
D. $(3 \cdot 10^3) + (9 \cdot 10^2) + (5 \cdot 10^1) + (4 \cdot 10^0)$

What is each number written in scientific notation?

- _____ 42. 36,000,000
A. 3.6×10^9 C. 36×10^6
B. 3.6×10^8 D. 3.6×10^7
- _____ 43. 0.0000234
A. 2.34×10^{-5} C. 234×10^6
B. 2.34×10^{-6} D. 23.4×10^5

What is each number written in standard notation?

- _____ 44. 3.6×10^6
A. 3,600,000 C. 36,000,000
B. 360,000 D. 36,000
- _____ 45. -3.84×10^{-1}
A. -0.384 C. -0.0000384
B. 38,400,000 D. 3,840,000

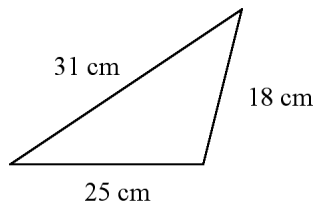
Find the product or quotient. Write the answer in scientific notation and in standard form. Round to the appropriate number of significant digits.

- _____ 46. $(8.55 \times 10^2)(4.36 \times 10^{-4})$
A. 3.73×10^{-6} ; 0.00000373 C. 3.73×10^{-1} ; 0.373
B. 8.55×10^{-1} ; 0.855 D. 1.291×10^{-1} ; 0.1291

Name: _____

Find the perimeter of the figure.

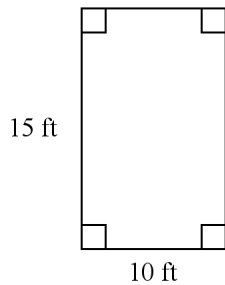
_____ 47.



Drawing not to scale

- A. 74 cm B. 80 cm C. 68 cm D. 87 cm

_____ 48.

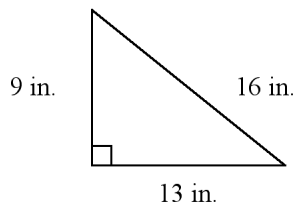


Drawing not to scale

- A. 25 ft B. 60 ft C. 50 ft D. 150 ft

Find the area of the figure.

_____ 49.



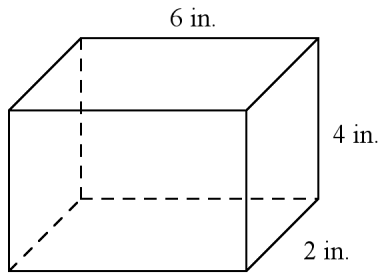
Drawing not to scale

- A. 38 in.² B. 117 in.² C. 468 in.² D. 58.5 in.²

Name: _____

Find the volume of the solid. Round to the nearest tenth if necessary.

_____ 50.



Drawing not to scale

- A. 24 in.^3 B. 96 in.^3 C. 48 in.^3 D. 16 in.^3

_____ 51. The table shows how the height of a stack of DVDs depends on the number of DVDs. What is a rule for the height?

| Number of DVDs | Height (cm) |
|----------------|-------------|
| 2 | 18 |
| 3 | 27 |
| 4 | 36 |
| n | ? |

- A. $h = 9n$ C. $h = 2n$
B. $h = 8n$ D. $h = \frac{n}{9}$

What is the simplified form of the expression? YOU MAY USE A CALCULATOR.

- _____ 52. 7^4
A. 343 C. 16,807
B. 16,384 D. 2,401

What is the simplified form of each expression? You may NOT use a calculator.

- _____ 53. $4(20 + 12) \div (4 - 3)$
A. 29 B. 80 C. 128 D. 92
- _____ 54. $3^3 \cdot 32 + 12 \div 4$
A. 291 B. 219 C. 437 D. 867
- _____ 55. Evaluate $u + xy$, for $u = 18$, $x = 10$, and $y = 8$.
A. 188 B. 36 C. 98 D. 224
- _____ 56. Evaluate $(ab)^2$ for $a = 4$ and $b = 3$.
A. 36 B. 24 C. 81 D. 144

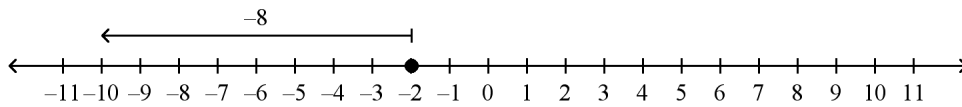
Name: _____

What is the simplified form of each expression?

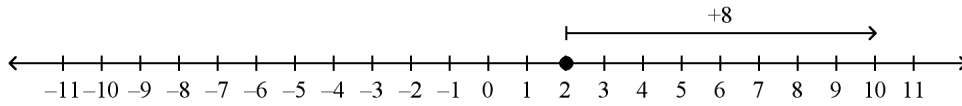
- _____ 57. $\sqrt{169}$
A. 338 B. 84.5 C. 12 D. 13

- _____ 58. What is the order of $\sqrt{5}$, -0.1 , $-\frac{5}{3}$, 0.7 , $\sqrt{2}$ from least to greatest?
A. $0.7, \sqrt{2}, -\frac{5}{3}, \sqrt{5}, -0.1$ C. $-\frac{5}{3}, -0.1, 0.7, \sqrt{2}, \sqrt{5}$
B. $\sqrt{5}, \sqrt{2}, 0.7, -\frac{5}{3}, -0.1$ D. $-0.1, 0.7, \sqrt{2}, \sqrt{5}, -\frac{5}{3}$

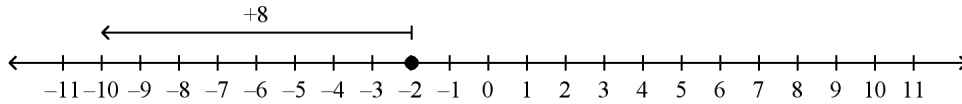
- _____ 59. Which number line model can you use to simplify $2 + (-8)$?
A.



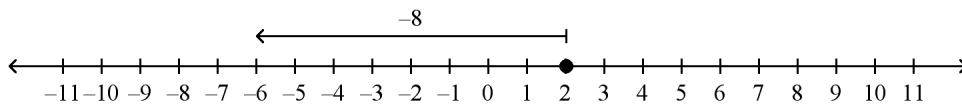
B.



C.



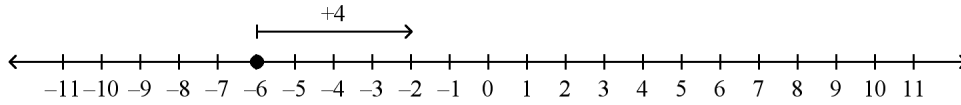
D.



Name: _____

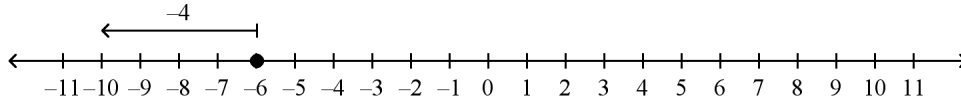
- _____ 60. Which number line model can you use to simplify $-6 + 4$?

A.



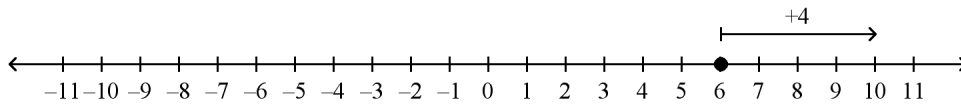
$$-6 + 4 = -2$$

B.



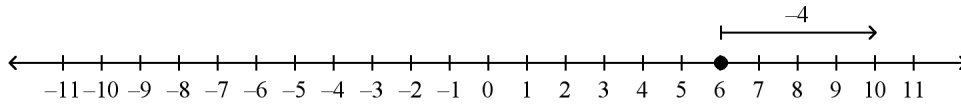
$$-6 + 4 = -10$$

C.



$$-6 + 4 = 10$$

D.



$$-6 + 4 = 10$$

What is each sum? YOU MAY NOT USE A CALCULATOR.

- _____ 61. $-7 + 5$
A. -2 B. 12 C. -12 D. 2

- _____ 62. $-6 + (-3)$
A. 9 B. -3 C. 3 D. -9

What is each difference? YOU MAY NOT USE A CALCULATOR.

- _____ 63. $-1.8 - 3.9$
A. -2.1 B. 5.7 C. 2.1 D. -5.7

What is each product? YOU MAY NOT USE A CALCULATOR.

- _____ 64. $8(-1)$
A. -1.4 B. -8 C. 8 D. 11.2

What is the simplified form of each expression? YOU MAY NOT USE A CALCULATOR.

- _____ 65. $-\sqrt{196}$
A. 98 B. -14 C. 14 D. 392

Name: _____

- _____ 66. Is $x = 1$ a solution of the equation $2 - 8x = -6$?
A. yes B. no

What is the solution of each equation?

- _____ 67. $x + 3 = 17$?
A. 16 C. 13
B. 14 D. 15

- _____ 68. $\frac{x}{9} = 10$?
A. 90 C. 99
B. 100 D. 19

- _____ 69. Is $(3, 13)$ a solution of the equation $y = 4x$?
A. yes B. no

- _____ 70. Which ordered pair is a solution of the equation $y = 3x$?
A. $(-2, -9)$ C. $(-8, -3)$
B. $(-8, -18)$ D. $(-10, -30)$

What is the solution of the equation?

- _____ 71. $3 = b + 3$
A. 0 C. 9
B. 1 D. 6

- _____ 72. $w - 2 = -3$
A. $-\frac{3}{2}$ C. -1
B. -5 D. 6

- _____ 73. $3.4 = 2p$
A. $\frac{1}{2}$ C. 1.7
B. 3.4 D. 0.3

What is the solution of the equation?

- _____ 74. $16 = -d + 6$
A. 10 B. -10 C. -9 D. -15

What is the solution of the equation?

- _____ 75. $2 = 6p - 8 - 5p$
A. -10 B. -6 C. 2 D. 10

Name: _____

What is the solution of the equation?

- _____ 76. $4(y + 2) = 32$
A. 4 B. 6 C. -10 D. 10

What is the solution of the equation?

- _____ 77. $6x - 3 = 5x - 5$
A. -4 B. -2 C. 0 D. -1

Find the product or quotient. YOU MAY NOT USE A CALCULATOR.

- _____ 78. $0.07 \cdot 4.7$
A. 32.9
B. 0.329
C. 0.0329
D. 3.29

Write the percent as a decimal and as a fraction or mixed number.

- _____ 79. 145%
A. 1.45, $1\frac{9}{20}$ C. 0.145, $\frac{29}{200}$
B. 14.5, $14\frac{1}{2}$ D. none of these

- _____ 80. 49.7%
A. 0.0497, $\frac{497}{10000}$ C. 4.97, $4\frac{97}{100}$
B. 49.7, $49\frac{7}{10}$ D. 0.497, $\frac{497}{1000}$

- _____ 81. Round to the nearest thousandth: 1,402.092584
A. 1,000 C. 1,402.092
B. 1,402.09 D. 1,402.093

- _____ 82. Round to the nearest integer: -23.459
A. -23 C. -23.4
B. -24 D. -23.5

- _____ 83. Round to the nearest tenth: 15.568
A. 15.6 C. 15.5
B. 16 D. 15.7

- _____ 84. Round to the nearest hundredth: 259.3446
A. 300 C. 259.34
B. 200 D. 259.35